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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,212

09/24/2003

Sarah E. Kim

ITL.1039US (P14622)

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03/28/2007

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HOUSTON, TX 77057-2631

EXAMINER

CHU, CHRIS C

ART UNIT

PAPER NUMBER

2815

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/669,212

Applicant(s)

KIM ET AL.

Examiner

Chris C. Chu

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10 - 25 is/are pending in the application.
- 4a) Of the above claim(s) 14 - 17- is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10, 18, 19 and 23 is/are rejected.
- 7) ☒ Claim(s) 11 - 13, 20 - 22, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Appeal Brief***

1. In view of the Pre-appeal Conference filed on July 31, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent; except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 10, 18, 19 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Goodson et al. (U. S. Pat. No. 6,942,018).

Regarding claim 10, Goodson et al. discloses in e.g., Fig. 1 and Fig. 18 a packaged integrated system (the system 100 in Fig. 1; column 7, lines 17 and 18) comprising:

- an integrated circuit (50; column 7, lines 19 – 22);
- an integrated electroosmotic pump (300; column 7, line 22) mounted on said integrated circuit (50; see e.g., Fig. 18);
- a catalytic re-combiner (326; column 9, lines 56 – 58 and see e.g., Fig. 2); and
- a package (the package in Fig. 18) including said circuit (50), said pump (300), and said re-combiner (326; see Fig. 18 and Fig. 2).

Regarding claim 18, Goodson et al. discloses in e.g., Fig. 1 and Fig. 18 said package (the package in e.g., Fig. 18) being a bumpless build-up layer package (see Fig. 18).

Regarding claim 19, Goodson et al. discloses in e.g., Fig. 1 and Fig. 18 a packaged integrated circuit (the package in Fig. 18) comprising:

- an integrated circuit (50);
- an integrated electroosmotic pump (300; column 8, line 5);
- a catalytic re-combiner (326; column 9, lines 56 – 58 and see e.g., Fig. 2); and
- a bumpless build-up layer package (the package in Fig. 18) including said circuit (50), said pump (300), and said re-combiner (326), said package (the package in Fig. 18) including a build-up layer (the layer that contains the element 300) that mechanically couples said circuit (50), said pump (300), and said re-combiner (326; see e.g., Fig. 18).

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Regarding claim 23, Goodson et al. discloses in e.g., Fig. 1 and Fig. 18 a heat spreader (200; column 7, line 18) coupled to said build-up layer (the layer that contains the element 300; see e.g., Fig. 18).

***Allowable Subject Matter***

4. Claims 11 – 13, 20 – 22, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(A) Claims 11 and 20 contain allowable subject matter because none of references of record teach or suggest, either singularly or in combination, at least the limitation of the integrated electroosmotic pump being formed on a first die, the integrated circuit being formed on a second die and the re-combiner being formed on a third die.

(B) Since claims 12, 13, 21, 22, 24 and 25 are dependent claims of objected claim (claims 11 and 20), these claims are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (e.g., claims 11 and 20).

***Response to Arguments***

5. Applicant's arguments with respect to claims 10 and 19 have been considered but are moot in view of the new ground(s) of rejection.

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*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris C. Chu whose telephone number is 571-272-1724. The examiner can normally be reached on 11:30 - 8:00.

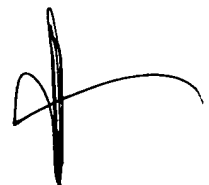
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chris C. Chu  
Examiner  
Art Unit 2815

c.c.

0. Tuesday, March 06, 2007



KENNETH PARKER  
SUPERVISORY PATENT EXAMINER